LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

TRIAL BURN REPORT OUTLINE

PREPARED BY LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

ENGINEERING GROUP 3

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LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

GUIDANCE FOR ORGANIZATION, CONTENT AND FORMAT

TRIAL BURN REPORT

(notes are in italics)

CERTIFICATION FORM

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APPENDIX A – STACK SAMPLING REPORT

- **A.1** Narrative
- **A.2** Summary of sampling and stack gas conditions *(Include sample volumes, molecular weight, moisture, stack gas temperature and flow, etc.)*
- **A.3** Calculation of sample point locations, in accordance with Method 1
- **A.4** Example calculation of average velocity/volumetric flow rate, in accordance with Method 2
- **A.5** Example calculation of dry molecular weight, in accordance with Method 3
- **A.6** Example calculation of moisture content, in accordance with Method 4
- **A.7** Field Data Sheets. *Organized by method, then condition and run, included for all methods and all completed runs. Field data sheets should be copies of originals and not rewritten.*
- **A.8** Independent CEMS information. *This should include calibration data and data collected from the CEMS during testing.*
- **A.9** Analyses performed by stack sampling *company (Include summary and full data package. Data package must follow analytical data package format.)*
- **A.10** Stack sampling equipment calibration data
- **A.11** Certification of Lab Accreditation Status

APPENDIX B – FEEDSTREAM SAMPLING REPORT

- **B.1** Field Sampling Logs. *Indicate sampling method, time, and frequency. Field data sheets should be copies of originals and not rewritten.*
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  - **B.1.3** Residue Sampling (e.g. scrubber effluent)
- **B.2** Process knowledge and how obtained *(if applicable)*

APPENDIX C – SPIKING REPORT

- **C.1** Narrative. *Include details on technique, injection point, spiking solutions, QA/QC, and any problems incurred.*
- **C.2** Certificates of Analysis for Spiking Solutions

C.3 Field Logsheets. *Field data sheets should be copies of originals and not rewritten.*
C.4 Run Totalizer Data *(if continuous measurement device used)*
C.5 Data in graphical form *(if available)*
C.6 Data in tabular form *(include date and time)*
C.7 Pre- and Post-Test Calibration Sheets for Spiking Equipment

APPENDIX D – QA/QC DATA REPORT

D.1 Field Sampling QA/QC
- **D.1.1** Field data collected for QA/QC. *This includes trip blanks, equipment rinses, reagent blanks, blank trains, etc. Include description of what was collected, how it was collected, and when it was collected.*
- **D.1.2** Audit report of field activities *(provided by the QAO or 3rd party auditor)*

D.2 Overall Lab QA/QC *(provided by the QAO)*
- **D.2.1** Internal audit results
- **D.2.2** Performance evaluation checks. *Include results of all audits, i.e. VOST, metals, hexavalent chromium, chlorine, and dioxin/furan.*
- **D.2.3** Data quality validation and verification
- **D.2.4** Data quality assessment report

APPENDIX E – CALIBRATION DATA

E.1 Process Monitoring Equipment, i.e. thermocouples, pH meters, flowmeters
E.2 CEMS, including gas cylinder certificates and daily calibration results

APPENDIX F – SAMPLE EMISSIONS CALCULATIONS

F.1 Nomenclature Table with terms, acronyms, and abbreviations
F.2 Example Calculations*. For ANY and ALL calculations in the report, including units on everything. Equations must be explained in detail and contain any necessary references to equation development and data used in the equations. Data calculations must explain the handling of non-detect values and blank corrections.*
- **F.2.1** Feed rate calculations
- **F.2.2** Stack sampling calculations (unless included in Appendix A)
  - **F.2.2.1** Volume of dry gas sampled
  - **F.2.2.2** Volume of water vapor collected
  - **F.2.2.3** Percent moisture
  - **F.2.2.4** Average molecular weight of stack gas
  - **F.2.2.5** Percent excess air at sample point
  - **F.2.2.6** Percent isokinetic sampling
  - **F.2.2.7** DRE and SRE *(as applicable)*
  - **F.2.2.8** Particulate emissions results. *Including cyclone, probe, filter, stack gas concentration at actual and STP conditions, emission rate, and size distribution.*
  - **F.2.2.9** Metals emissions results. *Including filter, impinger content, stack gas concentration at actual and STP conditions, emission rate, and metals removal efficiency. Include calculations for metals extrapolation.*
  - **F.2.2.10** HCl/Chlorine emissions results. *Including impinger content, stack gas concentration at actual and STP conditions, emission rate, and removal efficiency.*

F.2.2.11 Organic emissions results. *Including XAD, tenax/tenax-charcoal, stack gas concentration at actual and STP conditions, emission rate.*

F.2.3 Other

APPENDIX G- OPERATING DATA REPORT

- **G.1** Process Data. *Organized by condition and by run, including time and all regulated parameters (with units of measurement), i.e. combustion chamber temperature, hazardous waste feed rate, vent flow rate, inlet temperature to APCE, CEMS data, etc. Data must start when sampling starts and end at or after sampling completion.*
  - **G.1.1** Data in tabular form
  - **G.1.2** Data in graphical form (trend diagrams) *(if available)*
- **G.2** Data on batch feed sizes and blending ratios
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APPENDIX H – FIELD LOGS (*Data collected and/or observations made by personnel)*

- **H.1** Facility Personnel *(if available)*
- **H.2** Test Coordinator
- **H.3** Quality Assurance Officer
- **H.4** Process Samplers
- **H.5** Lab Personnel *(if present in the field)*
- **H.6** 3rd party auditor, if required *(Unless report is submitted to the Agency as a separate report.)*
- **H.7** Sample Custodian

APPENDIX I – ANALYTICAL DATA PACKAGES

Separate individual lab packages with tabbed dividers. Analytical data packages must follow the format guidance provided.

APPENDIX J - RESUMES

For all personnel listed on the project's organizational chart

ABBREVIATIONS

CPM = Hazardous Waste Combustion Permitting Manual, EPA Region 6, 1998.

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FORMAT REQUIREMENTS

General Requirements

1. Tables provided in this report format are provided only for guidance. Tables may be revised as necessary as long as all required information remains in the test report.
2. Table of Contents must refer to specific volume and page numbers. Each page of the report (including appendices) shall have a unique page number. Reports need not be numbered sequentially throughout all volumes, as long as each page in each volume contains a unique page number. Example: Page 17 of Appendix E may be numbered as E-17.
3. Reports for two combustion units may be combined only if they are of similar type (e.g., liquid injection).
4. All hard copies of the report shall be 2-sided. At least five paper copies shall be required – two for LDEQ review, one for EPA review, one for the parish library, and one for LDEQ permanent records. Additionally, a CD containing the information in the main body of the report in PDF and the tables in Excel or PDF must be submitted to LDEQ. Applicant shall contact the LDEQ permit writer for specific instructions.
5. Tables shall either be included in the back of the same section as the discussion or put together in a separate, clearly marked section.
6. Any appendix that amounts to more than one volume shall be designated by the appendix letter followed by sequential 1, 2, 3.
7. Report volumes shall be limited to ring binders three inches or less in size.
8. Each bound volume, including appendices, shall be tabbed and indexed by section.

Analytical Data Package Format

This format applies to all data packages submitted in accordance with Appendix I and any stack sampling analysis submitted in Appendix A. All data packages must include the name of the laboratory and page numbers on each page. The Lab Analysis Coordinator or Lab Manager must certify that he/she has reviewed the report and all of the data meets the data quality objectives, except as noted. Data packages must be separated in tabbed sections by lab and sample method at a minimum, but should be broken down further by condition and run if practical.

- **A.** Table of Contents
- **B.** Data Narrative. *Include type of samples analyzed, date samples received; condition and temperature (if applicable) of samples on arrival, especially samples that were defective, exceeded temperature guidance, or were outside of holding times; holding times; methods for storing, preparing, and analyzing samples; deviations from planned preparation or analysis; flagged data with discussion on reasons, significance, and corrective action.*
- **C.** Chain of Custody and/or Request for Analysis Forms
- **D.** Sample Log with ID numbers, cross referenced to field ID numbers if different
- **E.** Data, in CLP-like format
  - **E.1** Sample ID name and number
  - **E.2** Analytical method followed
  - **E.3** Matrix type
  - **E.4** Date, time, and location of sample collection
  - **E.5** Temperatures of sample when received (if applicable)
  - **E.6** Detailed Chromatogram Integration Report. *Include how compounds were identified, retention time, area under the curve, calculated amount, flag if the*

peak is manually integrated, documentation on how and why peak is manually integrated and scan vs. database for spectral matches. Spectra displays should include the scan number or retention time of the peak being scanned. Chromatogram and spectra displays must include the laboratory sample ID number, instrument number, and identity of the analyst performing the analysis.

- **E.7** Result of the sample analysis and units associated with the number value
- **E.8** MDL, and reporting limit or SQL (if different than MDL)

F. Lab QA/QC

- **F.1** Lab equipment used. *Include information on instrumentation, such as type, model number, serial number, specifications of column used, etc.*
- **F.2** Description of calibration standards. *Identify all analytes used in the calibration.*
- **F.3** Calibration data
- **F.4** Identification of all reportable data
- **F.5** Identification of any sample contamination
- **F.6** Precision and accuracy results
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- **F.9** Lab control spikes
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- **F.12** Blank sample results
- **F.13** SQL determination summary (if applicable)
- **F.14** Quality Control Exception Report
- **F.15** Planned versus actual data quality objectives

G. Example Calculations. *For ANY and ALL calculations in the report, including units on everything. Equations must be explained in detail and contain any necessary references to equation development and data used in the equations.*

H. Certification that all methods and SOPs were correctly followed

I. Certification of Lab Accreditation